TOLLESBURY SCHOOL

Policy on Maths

This policy was adopted by the Governors in Oct 2023
It will be reviewed as part of the
monitoring and evaluation cycle in 2025/2026

Maths Policy

Purpose of Study

"Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject." National curriculum in England: Mathematics programmes of study (DfE, July 2014).

Aims

- To ensure that all pupils have access to a broad, balanced, relevant, challenging and well taught curriculum.
- To become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- To reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.
- To enable children to calculate efficiently, developing mental and written methods of calculation which they understand and use correctly.
- To make links between the different areas of mathematics and between other curriculum subjects.
- To foster a curiosity in mathematics and promote enjoyment of the subject.

The School Provision

Tollesbury School follows the National Curriculum for Mathematics as outlined in the programmes of study for mathematics. These programmes of study identify the areas of Maths which should be taught by the end of each key stage and suggest which aspects should be taught in each year group.

A separate 'Written Calculations' policy details how written methods for the four rules of number are taught.

'White Rose' is used as a teaching and planning tool. A range of other resources are used to support this document.

A daily maths lesson is provided for every child.

The new national curriculum came into force in September 2014.

Organisation

Groupings of children will vary according to the task set. They will work in either mixed or ability groups depending on the task.

Each class holds an additional maths fluency session, outside of the usual maths lesson, to consolidate the skills of mental maths, and rapid recall of number bonds and times tables. There will be a variety of activities planned over the course of each week.

The school recognises the importance of children learning their tables and number skills. As a school we have a subscription to DB Learning, an online learning platform, where children can access resources to practise their times tables.

The school places particular emphasis on the need to ensure Maths lessons are enjoyable and relevant. Opportunities are provided for practical activities and the needs of all learners are considered. Practical resources such as hundred squares, number lines, diennes, Numicon, place value cards and coins are used throughout the school to help consolidate children's understanding. Annually we celebrate 'Maths Day'.

Planning is informed by curricular targets and individual/group needs are evaluated and catered for in future planning.

Teaching Assistants are used to support children of all abilities within Maths lessons as appropriate. Some children receive additional support outside of the maths lesson.

See Appendix A for further information about the structure of maths lessons at Tollesbury.

Equal Opportunities

Each child will have equal access to the maths curriculum, regardless of gender, ability or race. Other cultures have made significant contributions to maths and children are made aware of this.

All pupils are provided with learning opportunities which enable them to experience success, gain confidence and acquire competence.

Special Educational Needs and Talented and Gifted children

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress will be based on the security of pupils' understanding and their readiness to progress to the next stage.

In line with the requirements of the new National Curriculum; pupils who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before any acceleration through new content. Their needs are met by differentiated planning and extension activities which will deepen their mathematical understanding (see Appendix A).

Those who are not sufficiently fluent with earlier material will consolidate their understanding, including through additional practice, before moving on. Their needs are met by differentiated planning and where possible extra support is given.

Assessment

Summative PUMA (Progress in Understanding Mathematics) assessments are used as a tool to assess children's attainment each term, alongside the teacher's ongoing formative assessment. These tests are also used to inform planning and teaching and gaps are analysed and addressed.

Target tracker is used to track attainment and progress in each year group. This shows whether each child is working below at or above age-related expectations.

In the final term of EYFS, each child's level of development is assessed against the early learning goals. Children are judged to be meeting expected levels of development, or not yet reaching expected levels ('emerging'). These judgements are based on ongoing teacher assessments and observations throughout the year.

KS1 SATs are no longer statutory. However, our children will take the tests to give the class teacher additional evidence to make their end of year assessments.

At the end of Key Stage 2 children will take statutory national tests.

At the end of Key Stage 1 children will be judged to be working at one of 4 performance descriptors using externally set, but internally marked tests:

- Working at greater depth
- Working at age related expectations
- Working towards age related expectations
    - Working below the standard of national curriculum assessments and not engaged in subject-specific study

At the end of Key Stage 2 children will be judged to be either working at the national standard or not working at the national standard using an externally set, externally marked test.

Cross-Curricular Links

There are opportunities for mathematical experiences to be drawn out from a wide range of other activities. Maths is an integral part of many subjects in the Primary Curriculum often in practical ways.

Recording and reporting

Children have opportunities to receive feedback through comments written in their books when their work is marked, and next step targets are identified in their maths books. As the children progress through the school they are encouraged to respond to this marking, initialling comments the teacher has made and recording their own responses to it. The importance of verbal feedback during lessons is acknowledged and books are marked with 'VF' to indicate when this has taken place. In addition to marking children's calculations and work, the teacher also uses the three-tick system detailed in the marking policy to indicate how successfully the child has achieved that lesson's learning objective.

An end of year report will be sent to parents. Their progress is discussed at parent consultation evenings during the Autumn and Spring terms.

The subject leader produces termly written reports to the Governing body.

Pupils who have a difficulty with maths or who are talented with maths are tracked through school to ensure that progress is being made from their starting points.

A record of all pupils' achievements is tracked from year to year and anomalies are identified. Teacher assessment is ongoing.

Resources

Each class holds some maths equipment within its room. Additional equipment is stored in the Maths cupboard in the corridor. Numicon is available for use throughout the school.

Review of Policy

The policy will be reviewed as part of the monitoring cycle.

Appendix 'A'

Maths
at
Tollesbury Primary School

Our Ethos

Mathematics is an essential part of a balanced curriculum that is both challenging and enjoyable. All learners should become fluent in the fundamentals of mathematics and should be able to reason mathematically and solve problems by applying their mathematical understanding. We endeavour to ensure that children develop an enthusiastic attitude towards their mathematics as well as looking towards the subject with confidence.

Mastery Statement

In our school, mastery is explained as becoming a 'deep sea diver.' Mastery is all about excellent teaching and learning where activities challenge all pupils despite their mathematical ability.

Teaching and Learning

Teachers draw on the range of different resources we have in school to create the best possible learning environment for our pupils. Planning is based on curriculum expectations and, as a school, we have access to White Rose resources to support planning, teaching and learning. Teachers are encouraged to use White Rose as a starting point rather than a ready-made planning tool so that they have the opportunity to use innovative and creative activities to inspire and engage pupils.

Differentiation

Mastery definition quoted from Ofsted: 'The large majority of pupils progress through the curriculum content at the same pace. Differentiation emphasises deep knowledge and individual support/intervention'.
To support this mastery definition at Tollesbury, the concept of 'SPACE' is used:

Scaffold- children have access to concrete resources (e.g. Numicon, cubes, bead strings) and/or adult support to allow them to access the learning objective. Pictorial representations may also be used.
Practice- this is the fluency part of the lesson where children are 'practicing' the skill that meets the learning objective. Varied fluency is an important part of this stage. Children who may already have the skill (identified through assessment for learning) may start further on through practice or move onto Apply, Challenge or Extend.
Apply- in this section, children are 'applying' the skill they have just learnt to ensure they have grasped the learning objective/mathematical skill. Variation is also important here.
Challenge- problem solving and reasoning skills are used in this section to allow children to 'dive deeper' into the learning objective. Higher level questioning is used to challenge the children's thinking and deepen their knowledge.
Extend- problem solving and reasoning skills are used in this section to allow children to 'dive deeper' into the learning objective. Higher level questioning is used to extend the children's thinking and deepen their knowledge.
To allow for 'the large majority' of children to access the problem solving and reasoning parts of the lesson, small group work, plenaries and mini-plenaries are used to support children with these skills and enable most children to access the problem solving and reasoning part of the maths curriculum.
World Maths Day and Maths Week, held at separate points throughout the year, are an ideal opportunity to promote mathematics as well as expose children to maths of the world beyond the realms of the curriculum.

Internal Assessment

Assessment of National Curriculum objectives is carried out using the PUMA assessment materials. The tests are given to the children mid-term. Data produced from the summative assessment is then paired with the class teacher's assessment and is fed into Target Tracker which allows teachers to identify gaps in the learning of pupils and then plan accordingly. SLT are then able to analyse data and get a clear overview of progress in maths and identify trends.

Moderation

We regularly moderate our judgements within two consortiums: Tiptree Consortium and The Blackwater Partnership. Additionally, we hold in-house moderation meetings each term.